

REDESIGNING THE VIRTUAL LEARNING ENVIRONMENT COVID-19 PANORAMA

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ABSTRACT

Covid-19 pandemic situation has a huge impact on education at the global level. Education is an important psychosocial pivot in configuring the nation. The situation of the pandemic has made it compulsory to reconfigure the mode of education. Before this pandemic, multimedia technology was being used in the classroom to enhance learning in a joyful way which was less burdensome but now the virtual classes have become the necessary tool to disseminate education. Comparisons between the natural school environment and virtual school environment are showing that technology alone cannot produce better learning outcomes. So, educators should have knowledge of applying technology such that the learner's cognitive, social and affective development should be intact. Learning depends on selecting relevant information, mentally organizing it into consistent structures, or his ability to integrate new information with the existing knowledge. The Internet has emerged in 1990, now it has become a necessary part of our life. The flexible access to internet is providing new ways of communication. Virtual schools are becoming the reality in the present emergency situation.

KEYWORDS: Virtual Learning Environment Covid-19

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INTRODUCTION

Advancement in communication technology has heralded a revolution for configuring teaching and learning in the current situation when the physical presence of the environment of going to school is not possible. The revolution of communication technology has led to scholars to emancipate and enhance the learning process which was totally dependent on virtual rooms in the lockdown situation. Want to improve the process of learning all the practice done by the teacher in the virtual class, so that they always try to implement some innovative techniques in the virtual classroom, if it is related to human factors or technical factors.

But applying any new technique demands precaution and without knowing the effect of technology (either it is long term or short time) it may be a disaster for the learning process. Therefore, the role of a researcher is very important in providing guidelines for teachers in using different technology.

It was for the first time that the NPE (1986) laid stress on the use of computers for instructions in schools as they were expected to make environmentally friendly joyful understandings and would overcome the constraints of conventional classroom teaching. And in the mid 1990s, Virtual Learning Environment (VLE) came with the goal as a supportive tool for online learning and teaching. Before the pandemic, in many classrooms' multimedia was used by the teachers as a supportive tool. Multimedia technology-centered training approaches provide instruction through a variety of virtual learning environments commonly referred to as a Learning Content Management System (LCMS). An LCMS is a centralized computer infrastructure that manages processes,

documentation and content. Multimedia includes a variety of electronic sources of words, images, audio, video and other electronic formats. It also includes print materials, computers, the internet, E-mail, websites etc. The available empirical research suggests that multimedia learning can enhance student learning, provided scientific design principles are used (Clark & Mayer, 2008). The new technology is undoubtedly interactive, entertaining, and cheaper in the sense that it is capable of transferring and disseminating information widely and instantly. Technology should be applied according to the content of learning. Research comparing traditional classroom methods to online presentation and discussion is showing few signs that technology alone cannot produce better learning outcomes (Clark, 1994, 2001, 2003; Salmon, 1984). This was the situation which was explored before the Covid-19.

As Mayer describe the complex character of the learning process. The five types of knowledge that may be learned include; data or information, method or mode, process, plans, and faiths (Anderson and Krathwohl, 2001; Mayer and Wittrock, 2006). Mayer defines Learning as a change in the student's knowledge resulting from the experience in the learning environment. Therefore, the environment of learning is of utmost importance for causing the changes in the learner's learning process.

Does Learning Possible in Vacuum?

School has been the place where teacher and pupil interact together physically. It has been the setting where the physical world does exist and that is natural for humankind. The term learning environments refers to the social, physical, psychological and pedagogical context in which learning occurs and which affects student achievement and attitudes (Fraser, 2007, 2012). Kurt Lewin (1937) has proposed that behavior is the function of interaction between person and environment $\{\text{Behavior} = f(\text{Person} * \text{Environment})\}$. Kerr, Fisher, Yaxley and Fraser (2006) established a positive relationship between classroom environment and cognitive and affective outcomes. Vygotsky specified that the conclusions should be made based on the behavior of a student in a social setting. Fundamentally Vygotsky recognized that social settings and learning are closely entwined. Certainly, this social setting is belonging to a natural setting, not artificially created social groups. Albert Bandura's social learning theory has suggested that human beings adopt things from society & get information from there, and that learning is facilitated through concepts such as modeling, observational learning and imitation. He suggests that students gain knowledge after watching others as well as from "model" behavior and vicarious learning, have many methods that cover alertness, sustaining, yielding and inspiration. If people have a conversation or talk to different public, the situation or references also shows our gestures that suggest human nature. In totality, it decided human behavior with others. In other words, people can understands things better when they come in contact with others or basically when they have some rebuttal or counter opinion. Older concept of three tier / three level teaching suggested and proved that manner, mode and execution of content in a classroom before students is prima facie factor of good education or teaching. (Fraser, 1994). Sociological and Psychological aspects also enhance teaching module which encourages multidimensional exposure like collective approach, self-confidence, result seeking performance, motivation, goal oriented and definitely cooperation of mentor Jacques (1991: 72) pointed as "a lack of attention to the socio-emotional dimension means that many of the task aims cannot be achieved". Without an environment of trust and cooperation, students will not feel the risk of making mistakes and learning from them. Rourke et al (1999) suggested that community of inquiry model where teaching is possible by the communication following contexts or essentials; analytic approach, rational thoughts and collective efforts. Laurillard's (2002) iterative model of Non-formal dialogue is an attempt to do interaction logically or in a civilized way. These are emphasizing the primacy of the social

dimension to learning. The social dimension is a very important part of the physical learning environment. The question is that can physically learning environment be able to replace the virtual learning environment. The situation of COVID-19 has provided this panorama to understand the impact of the virtual environment on learning.

Replacement of Natural Learning Environment with Virtual Learning Environment

Does a virtual learning environment fulfil the requirement of the natural learning world. Existence of the physical world is an experience which cannot be replaced by the virtual setting but when it became a compulsion to switch over to the virtual setting then it is the educator's responsibility to understand the need of using the technology in a proper way. The global scenario of the world has been changed so that the new education paradigm is developing, one that integrates the technology of computers and the internet in education. The use of a computer, laptop, smart phone and especially the internet, opens a new world of potential. With use of technology, education can surpass the physical boundaries of the class and provide students the opportunity to experience more.

Virtual classrooms have some major concerns for researchers because of some specified benefits. One brief research had been held in order to find the importance and practicality of Online Classes in year 2001. In view of Jason (2001) learners' opinion the online classes are good option to learn with less effort. The content and material are accessible all the time. Anyone may avail it any time as per his convenience. Though videos and content that are available on web can not consider as virtual classroom situation, where the teacher is available for interaction yet it is part of internet teaching. Nowadays many online certificates courses are available which are very comfortable easy to manage in both manners physically and economically too.

Virtual class room environment forces the user to be more pragmatic in their actions and alter their behavior accordingly. Teachers and pupils who normally had difficulties in controlling their teaching and studying acts gradually found that the new learning environment required them to develop novel ways of teaching and learning. They found that they patiently had to wait their turn, speak more clearly, and moderate their accents and plan more carefully what they were going to present. Both teachers and pupils had to adapt to mediate interactions that required everyone to present their points quickly, precisely and audibly for the benefit of everyone and not just for the natural classroom (Husu, 2000). Although this is also a challenge for teachers to adopt the technology used for virtual classes, a large percentage of teachers remain reluctant and skeptical about the internet, with Becker in 2000 stating up to 70% of American teachers (in comparison to India it would be a better condition in America) fall into reluctant or late adopter categories when it comes to new technologies. After having this kind of advantages of virtual class room environment, the major challenge is to restore social and affective state of behavior of the student.

Cognitive and Behavioral Active Learning

The question is that how we can acquire the goal of meaningful learning through virtual classes. According to Mayer, there are two types of active learning, cognitive and behavioral. The active learning assumption is that learners are not passive and that they are actively engaged. The cognitive active learning assumption states that learners are continually cognitively processing mental information, making connections and creating mental models.

Virtual learning environment provided a new solution that changes the phenomenon of learner and teacher. Virtual class has increased the student's concentration and helps them to get involved in this new teaching mode or process. Sometimes too much information is presented to the learner which results in cognitive overloading thus limiting or

preventing information processing (Mayer, 2001; Clarke, 2005). When cognitive processes become excessive, learners go into essential overload and meaningful learning ceases. The limited capacity cognitive load theory assumption states that knowledge seekers have a limited amount of information which could be formulated in a single period. (Baddeley, 2000; Chandler & Sweller, 1991).

Behavioral active learning assumption states that human cognition is a result of some interactive combination between memory and behavior. Learning through virtual classes are additive, if they exceed available working memory learning will cease.

What about the Social and Affective State?

The underlying process of meaningful learning includes cognitive and behavioral learning and the most important concern of this paper is that all this will depend on the affective state of the learner and teacher. Schacter (2001) asserts that emotional factors play a key role in processing multimedia learning information, so that it may be also true for virtual learning because a teacher has no direct interaction with the student, the teacher may not know the emotional / affective state of the student. Negative emotions may present issues in accessing information while a positive mood will increase access to working memory (Oaksford, Morris, Grainger, and Williams, 1996). Teaching needed cross-communication with the outside world through a variety of objects, instruments, human beings, and subjects. However various learners go through with like circumstances in a specific separate approach. Many variables influence attention to the learner. In other words, it is the affective state of the learner which influence the learning process. It is believed that ability to accommodate the information is depending upon the knowledge a person has stored and can recall. Affective variables influence the interpretation of the environment. Murphy and Zajons (1993) have demonstrated that our brains can evaluate the importance of an object in a quarter of a second, in spite of their complexity; affective evaluations are performed rapidly and effectively. When students watch a teacher during a lecture, they process the expression on her face and the emotion in her voice at the same time and the teacher's facial expressions influence how the student interprets her voice (De Gelder, Bocker, Tuomainen, Hensen & Vroomen, 1999). There is a need to study the process of learning by integrating all these three variables that are active cognitive, social and affective state of the learner. Osguthrope and Graham (2003) identify a number of strengths and weaknesses of traditional face to face instruction and predominantly online course models often create isolated learning environments for students, which can reduce individual motivation. Isolation state of mind in virtual class room may lead to less motivation to keep on learning process among the teacher and learner.

Three aspects of the learning process are cognitive, social and affective, particularly when they are using many modes of communication technology for disseminating the knowledge. The skillful and knowledgeable people are most important for the development of any society. According to Wagner in today's digital age, the "next generation" (Internet friendly, among other things, the habit of using the web to instantly satisfy and enhance friendships, self-directed and interest-based learning; And constantly connected, created and multitasking in the multimedia world everywhere except at school. Schools are designed to ensure that students learn what society considers good and important. As students learn, their knowledge broadens and deepens, old skills get polished and newer skills acquired. The new technology if exploited and implanted effectively can bring the change in the learning process. It is not possible to create a natural learning environment in virtual classrooms but teachers can design the learning activities environment to promote to express emotions of the child.

Redesigning the Virtual Learning Environment

In this paper, researcher is suggesting a few tools to redesign the virtual learning environment so that it could able to enhance social and affective environment.

- *Modeling is very important part therefore teacher should express their emotion so that students also can also express their emotion.*
- *Activities related to Meta-cognition, for example to explain students' ideas, the process how they learn.*
- *Regular Self and peer review, inter team assessment.*
- *Space for student-to-student dialogue should be provided.*
- *Enhancing interactive time before and after the lecture between teacher and student.*
- *Conducting an interactive session between to teacher and student once a week to share the problems related to the discomfort that is caused by online teaching.*
- *Making small groups of student for unstructured assignment.*
- *Make sure that camera should be on so that they can monitor the gestures of each other.*
- *Giving assignments that can enhance group cohesiveness and cooperation.*
- *Make the students free to talk about unstructured things within the Online classes.*
- *Celebration of some important festivals online.*
- *Role of parents to be redefined in the virtual learning environment.*

These efforts could build up the social environment in virtual classes (though it is not natural) where students can learn about the value of cooperation, empathy, personal expression of gestures, and can also be able to understand the gesture of others. Schools are designed to ensure that students learn what society considers good and important. As students learn, their knowledge broadens and deepens, old skills get polished and newer skills are acquired. Online chat lines are one-way and students can actively communicate with each other. These efforts can be made so that students can feel much like a natural learning environment. Thus, it is the necessity of any society to build proper pedagogical policy based on researches. One unit provides everything for the classroom, library, workplace and home in the present time when the natural boundaries of school and home has been collapsed the responsibility and role of parents also become important.

Adapting to this shift will require educational organizations to adopt new approaches for defining teacher work. Teachers and students are learning to use the internet in a variety of ways to enhance their teaching and learning experience. It can be challenging and threatening to both students and teachers in the manner that it makes new demands and changes to expectations associated with the natural environment. Despite many changes or lingering uncertainties of Covid-19, virtual learning is the only endeavor that has been adopted by educators to spread the flame of education.

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